



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/531,733

04/18/2005

Jonathon L Napper

NPW009NPUS

2306

24011 7590 10/08/2008
SILVERBROOK RESEARCH PTY LTD
393 DARLING STREET
BALMAIN, 2041
AUSTRALIA

EXAMINER

AKHAVANNIK, HADI

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

10/08/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Response to Arguments

.

1. Applicant argues that neither Ikebata nor Gierhart discloses that the written digital ink segment is generated from all the sampled points of the plurality of training text characters.

First, the examiner believes that a moving average used by Gierhart could include all the sampled points if the window of the moving average was sufficient.

Second, the examiner included Schwartz in the previous office action, which discloses taking the average of all the sample points of a tilt. Schwartz accomplishes this by finding the average values of an entire chain code. A chain code includes all the points.

Therefore, the Applicants arguments submitted 6/26/08 are not persuasive. Further, the amendments submitted 6/26/08 are not believed to distinguish over the prior art.

Information Disclosure Statement

2. The reference cited on the IDS submitted 9/12/08 under non patent literature, titled "Baseline Drift Correction of Handwritten Text" by Kim has not been submitted and therefore is not considered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 14, 17-22, 24-27 rejected under 35 U.S.C. 103(a) as being unpatentable over Ikebata (6226404) in view of Gierhart et al. (5730602, referred to as "Gierhart" herein) in further view of Schwartz (6215901).

Regarding claim 14, Ikebata discloses a method of estimating the orientation of a segment of digital ink, the method including the steps of: measuring the azimuth of the pen at a sampling rate during writer generation of the segment of digital ink (see figure 1 item 2, column 4 lines 19-28 discloses sampling rates, and column 3 lines 35-41 discloses calculating the slant angle or azimuth of the pen);

and estimating the orientation of said segment using the measured azimuth of the pen at sampled points (by calculating the slant angle the direction of the character is also calculated as disclosed in column 4 line 59 to column 5 line 4. Also, see figures 8-9 as it discloses correcting the orientation of a segment of digital ink).

Ikebata does not explicitly disclose determining an mean azimuth or subtracting the current point from the mean azimuth.

Gierhart discloses finding the moving average azimuth (see figure 7a and column 17 lines 50-55) and subtracting the average value from the current point (see column 17 lines 50-64, specifically lines 61-64, where variance is described).

It would have been obvious at the time of the invention to one of ordinary skill in the art to include in Ikebata the moving average azimuth calculating means as taught by Gierhart. The reason for the combination is because it makes for a more robust system that is able to calculate the difference from the current point to an average allowing the system to identify the difference between the current point and previous points.

Ikebata and Gierhart do not explicitly disclose taking the mean of all the sampled points but the moving average of Gierhart may include all the sampled points.

Schwartz discloses finding the average tilt of all the points (see column 11 lines 1-13 which discloses finding the mean of the points).

It would have been obvious at the time of the invention to one of ordinary skill in the art to include in Ikebata and Gierhart the ability to use more sampled points to create an average as taught by Schwartz. The reason for the combination is to create a more reliable average that includes more data to better predict the slant.

Regarding claim 17, Ikebata discloses that the estimated orientation of the segment of digital ink is subsequently used in a digital ink line orientation normalization technique (column 5 lines 1-4 discloses normalizing the slant angle so as to correct the orientation. This is also shown in figures 8-9).

Regarding claim 18, Ikebata discloses that a single, fixed orientation estimation is utilised for a line of digital ink (column 4 lines 40-63 discloses that a standard slant angle may be used. This standard slant angle is computed from the training data and this will act as a fixed estimation).

Regarding claim 19, Ikebata discloses that the orientation estimation that varies across a line of digital ink is utilized (in order to modify the standard angle disclosed in the rejection of claim 3, Ikebata also discloses calculating the average slant angle. In column 4 lines 40-50 and column 6- lines 7-44 he discloses calculating the average slant pattern. Therefore, in order to calculate the orientation using the average slant angle, the system must calculate the varying angle across the digital ink).

Regarding claim 20, Ikebata discloses normalizing the estimated orientation to be within the range of 0.degree. to 360.degree (Column 5 lines 59-65 discloses a slant compensation method that normalizes the digital ink by subtracting the standard slant angle, which is the average slant angle of the user, by the current angle. Column 6 discloses that the angles are between 0 and 360).

Regarding claim 21, column 6 lines 55-59 discloses that the slant angle is can be calculated for each of the input characters. This means that that the system can function for many characters.

Regarding claim 22, the examiner notes that one character can be read to be a line segment. Therefore the rejection of claim 6 discloses all aspects of claim 7.

Regarding claim 24, Ikebata discloses that the orientation estimation uses a writer independent handwriting model (column 5 lines 30-33 discloses that the system can use data from a user group or user. The user group may include as a group of left handed or right handed people.)

Regarding claim 25, Ikebata disclose that the orientation estimation uses a writer dependent handwriting model trained using sample digital ink input by the writer

Art Unit: 2624

(column 5 line 66 to column 6 line 6 disclose learning the users writing style to create the standard slant angle).

Regarding claim 26, the figures 8-9 disclose that a consistent baseline is used to calculate the standard angle as a character is placed back on the X axis.

Regarding claim 27, Ikebata does not disclose that the input data needs to have specific characteristics, therefore, the examiner believes that the data is arbitrary.

4. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ikebata in view of Gierhart in view of Schwartz in further view of Parthasarathy et al. (5740273, referred to as "Parthasarathy" herein).

Regarding claim 23, Ikebata and Gierhart disclose all aspects of claim 8 except for segmenting based on azimuth values.

Parthasarathy discloses that the line segmentation is performed by measuring a change in azimuth value (see figure 1 item 110 and column 3 lines 25-35 discloses segmenting points based on angle changes).

It would have been obvious at the time of the invention to one of ordinary skill in the art to include in Ikebata and Gierhart the segmenting means as taught by Parthasarathy. The reason for the combination is because it makes for a more robust system that can find character changes by looking for extreme angle changes.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HADI AKHAVANNIK whose telephone number is (571)272-8622. The examiner can normally be reached on 10:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on 571-272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2624

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jingge Wu/

Supervisory Patent Examiner, Art Unit 2624

HA

8/3/08